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POLICY

How should Alcohol Dependence be Treated? The Public View

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Abstract — Aims: The aim of this study was to assess public preferences on sources of help and treatment, and perception of prognosis for alcohol dependence. **Method:** A household survey was administered in 2002 to a probabilistic sample of 500 individuals, all residents of the city of São Paulo, Brazil, with ages ranging from 18 to 65. A vignette in colloquial language describing an individual with alcohol dependence (according to DSM-IV and ICD-10 criteria) was presented together with a structured questionnaire with questions about the vignette. **Results:** The public considered the help of lay people, self-help groups and psychologists the most useful. Medical professionals were viewed less favourably. The treatments and activities most recommended were psychotherapy and general activities, such as physical activities, keeping the mind busy and attending church services. Medical treatments were seen as more harmful than helpful. The more important determinants were identification of alcohol dependence as mental illness, religion and number of years of school completed. Prognosis with treatment was viewed as favourable. **Conclusion:** These results may indicate that the public needs to receive more information on the full range of treatments options, especially those related to professional or formal treatment.

INTRODUCTION

Alcohol use is related to a wide range of physical, mental and social harms. The World Health Organization (WHO, 1999) identified alcohol use as one of the major causes of the global burden of disease and the leading cause of male disability in industrialized regions (it ranks fourth in causing disabilities in developing countries). Alcohol dependence is a powerful mechanism sustaining alcohol consumption and thus impacting on both chronic and acute consequences of alcohol though it is also a consequence of drinking itself (WHO, 2004).

Despite the alarming nature of alcohol dependence, only a small proportion of individuals affected by this condition seek help through the formal system or through mutual assistance groups such as the 12-step programs (Dawson *et al*., 2006; Dufy *et al*., 2006; Proudfoot and Teesson, 2002). Most of the time, the problem is only dealt with informally, for example involving the affected individual and members of his or her family, friends or work colleagues. This is an important and worrying matter, given that there is clear evidence that lack of treatment, whether through interventions of a professional nature or through mutual assistance, is associated with a worse prognosis for alcohol dependence (Dawson *et al*., 2006).

The process of seeking help for health problems is generally influenced by a variety of factors. While the nature and severity of the symptoms provide the impetus for the pathway, its duration and direction are shaped by psychosocial and cultural factors (Rogler and Cortes, 1993). Among these, personal characteristics and experiences, type of help available and beliefs and attitudes regarding the problem and its treatment can be highlighted.

The beliefs and preferences among the general population regarding treatments for mental disorders, particularly depression and schizophrenia have been the focus of investigation in several recent studies (Angermeyer and Matschinger, 1996; Jorm *et al*., 1997, 2005; Angermeyer *et al*., 1999; Lauber *et al*., 2001, 2005; Riedel-Heller *et al*., 2005). However, few studies have been conducted on public perceptions of alcohol dependence. One of the exceptions is the study by Peluso and Blay (2008a) on public perceptions of alcohol dependence in the city of São Paulo (Brazil), which indicated that a small proportion of the interviewees (<20%) believed that it was a mental illness. The causes that were considered most important were those of a psychosocial nature, followed by those of a moral nature. Alcohol dependence was found to be associated with a high risk of violence and stigmatization. With regard to the public perception of treatments for alcohol dependence, according to recent reviews (Peluso and Blay, 2004; Angermeyer and Dietrich, 2006), there is little information in the literature and the studies that have been conducted presented various limitations, such as the use of small and/or unrepresentative samples of the population (Mulatu, 1999; Kohn *et al*., 2000).

Thus, the present study aimed to fill some of the gaps seen in the literature. This is, to the best of the authors' knowledge, one of the first studies carried out with a representative sample on the beliefs and preferences of the general population in relation to treatments for alcohol dependence. The objective of this study was to evaluate the beliefs of the population in relation to seeking help, sources of help, treatments and prognoses for alcohol dependence. Furthermore, the intention was to broaden the understanding of associations of socio-demographic variables, personal experiences with mental or emotional problems and identification of symptoms that were described in a vignette as 'mental illness', in relation to beliefs about sources of help and the treatment for this disorder.

Knowledge of the beliefs and preferences among the general population in relation to treatments for alcohol dependence is important for improving the understanding of the process of seeking help. It may provide backing for improving the access to treatment for the individuals affected.

METHOD

Sample

In May and June 2002, a household survey was carried out to evaluate the population's perception of alcohol dependence.

The sample was made up of residents of the city of São Paulo between 18 and 65 years old. A pre-determined number of 500 interviewees were selected, with the sample size being estimated by means of the statistical program 'Stacts Direct software'. Thus, a minimum number of 457 individuals were reached, utilizing, for this calculation, an estimated response frequency of 5%, with a 2% standard deviation and 95% confidence interval. Estimated frequencies were based on our pilot study and on similar international studies.

A random, multiple-stage sample with a substitution strategy was utilized. In this procedure, groups of 10 subjects were to be interviewed across the districts of the city of São Paulo. This distribution was proportional to the population of these districts, according to the demographic census performed by the *Instituto Brasileiro de Geografia e Estatística—IBGE* (Brazilian Institute of Geography and Statistics) in 2000. In the next step, census tracts were randomly selected within the districts and two blocks were randomly selected in each census tract. Five interviews were conducted on each block. After selecting the blocks, the first household to be approached was defined through the random selection of a crossing of two streets or avenues. Other households were selected using a systematic procedure. In each household, a resident between 18 and 65 years old was selected to participate in the interview based on a birthday closest to date of the interview. There were no call backs if the person was not at home.

This study was approved by the Ethics committee of the Federal University of São Paulo (Unifesp) and all participants signed an 'Informed Consent Form'.

Instrument

The instrument used was a structured questionnaire that was applied face to face by trained professional interviewers. The questionnaire was based on instruments used in similar studies (Jorm *et al*., 1997; Angermeyer *et al*., 1999) and on a pilot study carried out with the local population using semi-structured questions. The evaluation of beliefs about treatment of alcohol dependence began with the reading of a vignette, which described an individual with symptoms of this disorder according to the diagnostic criteria of the DSM-IV and the ICD 10. This vignette was constructed according to the model of Jorm *et al*. (1997) and, before use, was evaluated by three experienced psychiatrists at Unifesp in blind diagnostic allocations. There was complete diagnostic agreement. The sex of the individual described in the vignette (John/Mary) was randomly distributed between interviews.

Vignette

The following vignette (originally in Portuguese) was read by survey respondents:

> John is 45 years old and has always drunk alcoholic beverages. However, in recent months John has drunk much more than usual to attain the same effects as before. Every time he tries to stop or decrease, he becomes agitated, suffers nausea, trembling and cold sweats that are alleviated by the ingestion of more alcohol. Even knowing that alcohol is prejudicial to health, John is not able to stop drinking. His boss has noticed that he has been missing a lot of work and his production is well below normal.

After the presentation of the vignette, questions were asked about sources of help and recommended treatment and about the perception of prognosis with and without appropriate treatment.

Sources of help

Eleven potential sources of help were listed for evaluation: close friend, close relatives, religious leader (for example, priest, minister, evangelical bishop), faith healer ('benzedeira'), Umbanda priests and priestesses, pharmacy clerk, self-help group, psychologist, general practitioner, neurologist and psychiatrist. Each source of help was rated on a five-point scale indicating whether it would 'help a lot', 'help a little', 'neither help nor harm', 'harm a little' or 'harm a lot'. Following the rating, the subject had to choose which of the presented options should be sought first, in order to investigate help-seeking priorities.

Treatment

Seventeen options for treatment were presented: exercise/practice sports, read about the problem, rest/take vacation, eating better, keep mind busier, relaxation, go to church or religious services, take vitamins, take infusions or natural remedies, take drugs for depression/antidepressants, take drugs for pain, take antibiotics, take sedatives, psychological therapy, hospitalization in a general hospital, hospitalization in a psychiatric hospital and electroshock therapy. The respondent ranked each of the options on a five-point scale, indicating whether it would 'help a lot', 'help a little', 'neither help nor harm', 'harm a little' or 'harm a lot'.

The respondent was then asked to choose which of the options would help most, to elaborate a classification of treatment priorities.

Prognosis

Perception of prognosis was evaluated by asking two questions, each of which was responded to on a five-point scale: (i) 'If the person described received the most appropriate professional help, you believe that…' and (ii) 'If the person described did not receive any type of professional help, you believe that…'. The five-point response scale was as follows: 'he would completely recover', 'would recover in part', 'would remain unchanged', 'would get a little worse' and 'would get much worse'.

Statistical analysis

Besides the descriptive analysis (distribution of frequencies in percentages), analysis of variance was done in order to verify possible variations associated with sources of help and treatment.

Questions about sources of help and treatment were considered as dependent variables. These questions were initially subjected to factor analysis (analysis of the main components in Varimax rotation) to reduce the questions to a smaller number of factors. Each of the factor scores was considered a dependent variable.

The following independent variables were considered: sex (male, female), age (18–29 years old, 30–49 years old, 50–65 years old), religion (no religion, Catholic, Evangelical), education (0–7 years of study completed, 8 or more years of study completed), socio-economic class (Classes A/B/C, D/E, according to the classification system from the Brazilian Institute of Market Research—Abipeme), identification of the problem as a mental illness (yes, no), personal experience with mental health in general (yes, no).

Identification of the problem depicted in the vignette as mental illness was evaluated through the following question: 'Do you believe that John has some mental illness?' 18.8% of the interviewees answered yes to this question (see Peluso and Blay, 2008a).

The level of significance used was $P < 0.05$. The statistical analysis was carried out using the 'Statistical Package for the Social Sciences' (SPSS), version 10 for Windows.

RESULTS

The socio-demographic characteristics of the sample were similar to the profile of the population obtained of the city of São Paulo (10,434,252 inhabitants, according to the 2000 census by the Brazilian Institute of Geography and Statistics (IBGE) (Table 1).

Sources of help

Most of the options presented were considered to be more beneficial than harmful (Table 2). Self-help groups and psychologists were considered to be the most beneficial, followed by people in informal help systems. A clear preference for first-choice help from the informal system and from psychologists was observed. Medical professionals were less frequently considered to be the first choice for help.

Factorial analysis

The scree plot method was used to determine the factors to retain for rotation. Four factors were identified by this method. They were given the following names, according to the source of help that they represented: *professional system, unofficial system, informal system* and *self-help groups*. These explained 59.10% of the variance. The composition of the factors was as follows:

1. *Professional system* (eigenvalue 1.97; variance explained 17.95%): psychiatrist (factorial load 0.73), general practitioner (0.73), neurologist (0.70), psychologist (0.57)
2. *Unofficial system* (eigenvalue 1.90; variance explained 17.30%): Umbanda priests and priestesses (factorial load 0.89), faith healer (0.85), pharmacy clerk (0.51)
3. *Informal system* (eigenvalue 1.44; variance explained 13.15%): close family (0.78), close friend (0.65), religious leader (0.59)
4. *Self-help groups* (eigenvalue 1.17; variance explained 10.68%): self-help groups (factorial load 0.80).

The results from the variance analysis indicated that choosing the *professional system* was associated with identifying the problem as a mental illness ($F = 5.81, P = 0.01$), low schooling levels ($F = 4.57$, $P = 0.03$) and religion ($F = 3.78$, $P = 0.02$). Evangelicals presented the lowest preference for this help system.

Choosing the *unofficial system* was associated only with the variable of religion ($F = 26.13$, $P = 0.00$). Catholics were the group that most believed that this system was beneficial, while Evangelicals were the group that least believed in it.

Religion was also the only variable associated with the *informal system* of help ($F = 4.22$, $P = 0.01$). Catholics and Evangelicals were the groups that most believed that this system was capable of helping in relation to alcohol dependence.

The preference for *self-help groups* was associated with higher socio-economic classes ($F = 11.64$, $P = 0.00$) and religion ($F = 5.11$, $P = 0.00$). Catholics and individuals without a religion were the groups that most believed that this type of help was beneficial.

Treatments

Most of the treatments and activities presented were considered to be more beneficial than harmful (Table 3). Nonprofessional activities and psychological therapy were considered to be the most beneficial, while the use of medication was considered to be more harmful than beneficial.

The same tendency was observed in choosing the most beneficial treatment: psychological therapy was the preferred choice, followed by general nonprofessional activities.

Table 1. Socio-demographic characteristics of the sample and the total population of the city of São Paulo

	Sample ($n = 500$) (%)	Total population[a] (%)
Sex		
Male	45.6	45.1
Female	54.4	52.9
Age in years		
18–29	32.6	32.8[b]
30–49	42.0	42.0[b]
50–65	25.4	25.2[b]
Years of education		
0–3	9.6	15.7
4–7	29.4	32.4
8–10	18.8	19.4
11 or more	42.6	32.1

[a]Data from the first findings of the 2000 census from the IBGE for the population of the city of São Paulo for those over 10 years of age.
[b]Data for the population over 18 years old.

Table 2. Sources of help that were considered helpful or harmful and that were chosen as a first choice for help ($n = 500$)

	Helpful[a] (%)	Harmful[b] (%)	First choice (%)
Self-help group	96.4	2.0	31.8
Close relatives	87.2	5.8	28.8
Psychologist	94.8	1.6	11.6
Religious leader	80.2	6.2	8.8
Close friend	85.2	6.4	7.2
Psychiatrist	81.2	5.4	6.4
General practitioner	75.6	4.8	4.8
Neurologist	81.2	5.4	0.6
Faith healer	21.2	41.2	–
Umbanda priests and priestesses	13.0	54.8	–
Pharmacy clerk	3.0	91.0	–

[a]Grouped responses (help a lot + help a little).
[b]Grouped responses (harm a lot + harm a little).

Table 3. Treatments considered helpful or harmful and that were chosen as the first choice ($n = 500$)

	Helpful[a] (%)	Harmful[b] (%)	First choice (%)
Psychological therapy	95.8	1.6	36.0
Physical exercise	90.4	3.0	15.0
Keep your mind busy	96.0	2.0	14.2
Go to church	88.4	1.2	11.8
Hospitalization in a psychiatric hospital	43.8	43.4	8.0
Reading about the problem	88.6	2.6	5.4
Hospitalization in a general hospital	49.6	31.8	3.8
Eating better	93.6	0.4	3.2
Rest/take a vacation	60.8	24.2	1.0
Antidepressants	39.0	43.6	0.6
Relaxation	66.0	4.8	0.4
Infusions/natural remedies	62.4	6.0	0.4
Vitamins	64.0	5.2	–
Sedatives	29.6	54.6	–
Medicines for pain	24.8	47.6	–
Antibiotics	14.0	63.6	–
Electroshock therapy	3.8	89.8	–

[a]Grouped responses (help a lot + help a little).
[b]Grouped responses (harm a lot + harm a little).

Factorial analysis

The scree plot method was used to determine the number of factors to retain for rotation. Three factors were identified by this method: *medical treatment*, *general activities* and *psychosocial activities,* which explained 44.03% of the variance. The composition of the factors was as follows:

1. *Medical treatment* (eigenvalue 3.27; variance explained 19.27%): medicines for pain (factorial load 0.76), antibiotics (0.76), tranquillizers (0.74), antidepressives (0.70), hospitalization in psychiatric hospital (0.56), hospitalization in general hospital (0.55), electroshock therapy (0.49)
2. *General activities* (eigenvalue 2.30; variance explained 13.54%): vitamins (factorial load 0.76), infusions or natural remedies (0.76), eating better (0.64), keeping the mind occupied (0.44), going to church (0.44)
3. *Psychosocial activities* (eigenvalue 1.90; variance explained 11.21%): reading about the problem (factorial load 0.65), physical exercise (0.62), relaxation (0.56), resting (0.55), psychotherapy (0.43).

The results from the variance analysis indicated that *medical treatment* was associated with lower schooling levels ($F = 8.00$, $P = 0.00$) and identification of the problem as a mental illness ($F = 7.45$, $P = 0.00$).

The *general activities* factor was associated only with lower schooling levels ($F = 8.41$, $P = 0.00$) while the *psychosocial activities* factor was associated only with age ($F = 4.91$, $P = 0.00$). Younger individuals (18–49 years old) were those who most recommended these kinds of activities.

Prognosis

Almost all of the interviewees believed that, with appropriate treatment, recovery would be achieved in the situation described in the vignette (Table 4). However, most of them believed that the recovery would be partial. A large majority of the interviewees believed that, without treatment, the situation described in the vignette would worsen, and most of them believed it would worsen significantly.

Table 4. Perception of prognosis with and without appropriate treatment ($n = 500$)

	With treatment (%)	Without treatment (%)
Would recover completely	46.6	1.2
Would recover partially	50.2	3.6
Would not recover or worsen	2.4	16.0
Would worsen a little	0.2	13.4
Would worsen a lot	–	65.2

DISCUSSION

This has been, to the best of the authors' knowledge, the first population-based study using a representative sample to evaluate public perceptions regarding treatments for alcohol dependence. The results demonstrated that the general population valued help within the informal system, self-help groups and psychological help, while medical treatment was less valued. Moreover, this population believed that the prognosis for this disorder was very favourable with appropriate treatment.

Sources of help

Among the results, the population's preference for the nonprofessional help system was highlighted. Among the professionals, the positive assessment given to help from psychologists was clearly distinguished from the assessments given to medical professionals, who were less valued.

A similar tendency was also seen in the study by Kohn *et al*. (2000), among members of a community in Dominica. In this community, the source of help that was considered more appropriate for alcohol dependence was family and friends (27.5%), followed by psychologists (12.5%).

How can the preference for the informal help system and the higher value placed on psychologists in relation to alcohol dependence be understood? One factor that can be brought to bear for explaining this result is that, in general, this population did not identify alcohol dependence as a mental illness and that the causes attributed were mainly of a psychosocial and moral nature (Peluso and Blay, 2008a).

The importance attributed to the lay system for managing alcohol dependence may be a general tendency among the population of Brazil, since this has also been observed in relation to other mental disorders (Peluso and Blay, 2008b). This tendency to attribute importance to the lay system for managing mental disorders in general may be a cultural characteristic of the Brazilian population and is also visible in Hispanic populations.

Anthropological studies in our milieu have indicated the importance of the lay system of help for mental disorders. For example, Rabelo *et al*. (1999) evaluated the conceptions and practices of the population in a working class district in a Brazilian city (Salvador) and indicated the great influence exercised by relatives, neighbours and friends in the identification, management and treatment of mental disorders. A study about the experience of relatives in caring for patients with severe mental problems in the United States

(Guarnaccia *et al*., 1992) showed that the Hispanic relatives of patients with schizophrenia had more involvement and influence in treatment than relatives of patients of a European or African American background.

Another point that deserves highlighting in our results is the importance attributed by the population to self-help groups, which were considered to be the first choice for help. Self-help groups or mutual help groups like alcoholics anonymous form a resource that is widely utilized by people affected by alcohol abuse and dependence in Brazil and in other parts of the world (Campos, 2004). Their popularity may be related to a variety of factors. Firstly, the positive view of such treatment may be associated with its efficacy in achieving abstinence (Vaillant, 2005; Dawson *et al*., 2006). Secondly, it may be due to the perception that these groups are able to provide support, motivation and a sense of belonging and affirmation that are not available to alcohol-dependent individuals from other sources (Vaillant, 2005; Dufy *et al*., 2006)

Determinants

Identification of the vignette as a case of mental illness, schooling, socio-economic class and religion were shown to be associated with the preferences relating to sources of help.

Individuals who identified the symptoms of alcohol dependence described in the vignette as mental illness and who had lower education levels presented greater preference for the *professional system* of help. On the other hand, individuals from higher socio-economic classes presented greater preference for *self-help groups*.

While the relationship between identifying the situation as one of mental illness and preference for the *professional system* was expected, this was not so in relation to schooling level and socio-economic class. Our hypothesis had been that individuals with higher schooling and from higher socio-economic classes would, because they had more information available, present a preference for the *professional system* of help. However, the results pointed in a different direction, suggesting that the treatment preferences were more related to beliefs and subjective values than to these people's levels of information.

Among determinants evaluated in relation to sources of help, religion was outstandingly important. Religion has not been included as a possible determinant in studies of this type, but is considered a relevant phenomenon in our milieu for the management and treatment of mental illness (Rabelo *et al*., 1999; Redko, 2003).

Individuals without a religion presented lower preference for the *informal system*, while evangelicals had lower preference for the *professional system, unofficial system* and *self-help groups*.

The Evangelical religion has developed a great deal in recent decades in Brazil, with many new adepts, especially in the Pentecostal and Neo-Pentecostal wings. According to the 2000 census from the IBGE, Evangelicals make up ∼15% of the Brazilian population, with ∼75% of them being Pentecostals. Pentecostalism in Brazil can be considered a 'healing religion', and has its own repertory for interpreting the causes and solutions for diseases (Pierucci and Prandi, 1996). Therefore, the fact that the Evangelicals reveal less preference for various formal treatment options may in part reflect that this group finds the church a relevant place for dealing with and giving meaning to health problems and, as a result, depends less on formal help systems.

On the other hand, because individuals without a religion do not have support networks of a religious nature, they would tend to value professional help more highly.

Treatments and prognosis

In relation to the interventions evaluated, we observed preferences for psychotherapy and general nonprofessional activities. Medical treatments were viewed less favourably. These tendencies reinforced the results seen in relation to the people who could help the positive image of psychological therapy among this population and the preference for nonprofessional general activities, contrasting with the negative image of drug treatments and other treatments of a medical nature such as hospitalization and electroshock therapy.

These results may be reflecting a general tendency among the population, in which psychosocial interventions (and particularly psychotherapy) are preferred for treating mental disorders in a general manner, and a negative view is taking off medical treatments (and particularly drug treatments) (Peluso and Blay, 2008b). This tendency has been observed in a large proportion of the studies carried out in different countries to assess the populations' preferences for treating mental disorders (Angermeyer *et al*., 1999; Jorm *et al*., 2005; Lauber *et al*., 2005; Riedel-Heller *et al*., 2005).

Although our population presented preferences for the nonprofessional help system and for general activities for treating alcohol dependence, the importance of professional treatment, on the other hand, was also recognized. The view taken regarding the recovery of individuals affected by alcohol dependence was optimistic if appropriate treatment was administered and pessimistic without treatment.

Determinants

Among the possible determinants evaluated, schooling level, age and identification of the situation as one of the mental illness were shown to be associated with the type of treatment recommended.

Individuals with lower schooling levels presented a preference for *medical treatments* and for *general activities*. Those who identified the problem described in the vignette as mental illness presented a preference for *medical treatments*.

One possible explanation for the preference of *medical treatments* and *general activities* among individuals with lower schooling is that these individuals in Brazil place discomfort and suffering in the body, the main vehicle of expression and communication of their experiences (Duarte, 1986; Costa, 1989), being thus differentiated from the psychological model that places suffering on the level of the feelings, desires and thoughts. Therefore, it might be thought that medical treatment based on medication that acts principally on the somatic and corporeal level as well as general activities such as taking infusions and vitamins and eating better would be considered more useful than activities of a psychosocial nature.

Limitations

Some study limitations should be mentioned. This type of survey, based on the presentation of a hypothetical situation through a vignette, can produce an artificial situation that may

not reflect the real attitudes and behaviour of the individuals in actual situations of the disease. The use of questionnaires that consider opinions and knowledge, especially when applied face-to-face, is subject to producing socially desirable responses. In particular, this study, carried out by a university (a fact that was presented to all the respondents before the interview) may have stimulated the expression of opinions closer to scientific knowledge. As in population studies in general, individuals who are willing to be interviewed may have characteristics differing from those who refuse to participate. In this study, in which a substitution strategy was employed for individuals who were absent or refused to participate, this bias may have been more aggravated. However, in relation to the principal socio-demographic characteristics, there were no relevant differences between the sample and the general population.

The results of this study, carried out in the largest urban centre of Brazil, cannot be generalized for other Brazilian regions that have distinct economic, cultural and social characteristics.

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